

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN**

AUTHENTICOM, INC.

Plaintiff,

v.

**CDK GLOBAL, LLC; and THE REYNOLDS
AND REYNOLDS COMPANY**

Defendants.

Civil Case No. 17-cv-318

Declaration of Hal J. Singer

ASSIGNMENT AND ORGANIZATION OF REPORT

1. I have been asked by counsel for Authenticom, Inc. (“Plaintiff”) to offer a preliminary assessment of the competitive effects associated with CDK Global, LLC’s (“CDK”) and The Reynolds and Reynolds Company’s (“Reynolds”) (collectively, “Defendants”) restraints imposed on its customers (“vertical restraints”) and on each other (“horizontal restraints”). The opinions expressed herein are preliminary in the sense that they are based only on evidence that Authenticom has obtained prior to discovery. Although I have not reached a final conclusion with respect to anticompetitive effects and antitrust injury to Authenticom, given the evidence that I have reviewed, I conclude that Defendants’ horizontal and vertical restraints, including the blocking of third-party data integrators, likely harmed competition in general and Authenticom in particular. I reserve the right to amend my opinions as discovery of Defendants’ proprietary materials unfolds in this case.

2. Based on my experience and scholarship, I understand antitrust to be

focused on harms to competition. Therefore, I focus my analysis of Defendants' horizontal and vertical restraints and blocking activities (collectively, the "Challenged Conduct") on the harm to customers. If customers were harmed by the Challenged Conduct, and if Authenticom's harm flowed from the same conduct, then, as I have been instructed on the law, Authenticom suffered cognizable antitrust injury. The purpose of my report, however, is to address the economic effects of the Challenged Conduct, and not the legal consequences.

3. As described more fully below, Defendants provide competing Dealer Management Systems ("DMS"). Dealers pay DMS providers a license fee for the right to use the DMS to manage internal dealer operations, including storing their data. For many years, companies that provide software-based applications ("apps") to automobile dealers—also referred to in the industry as "vendors"—paid competitive rates for access to dealers' data, as third-party data access providers—called "integrators"—offered access to data stored on dealers' DMS databases.¹ Integrators such as Authenticom create value by making different raw data streams from different DMS platforms (written and formatted in different languages) cohesive and usable for apps; integrators also customize the data so that the apps receive the information that they require. Dealer data are therefore critical inputs in the production of app services.² Although app providers, not

1. Defendants also provided data access. In 2007, CDK offered free basic access; under its "Third-Party Basic Access" plan, dealers granted third parties (e.g., integrators or app providers) access to their data via a user ID and password, without being charged a fee by CDK. *See* Ralph Kisiel, *ADP Provides Dealers 3 Options on Data Access*, AUTOMOTIVE NEWS (Feb. 19, 2007) [hereinafter "Kisiel 2008"], available at <http://www.autonews.com/article/20070219/SUB/70215040/adp-provides-dealers-3-options-on-data-access>.

2. One could refer to integration services as aftermarkets (or "secondary products"), with DMS as the primary product. Under that framework, Defendants' vertical restraints

dealers, typically pay for data integration services, providers of those services require authorization from the dealer to obtain access to dealer data. Accordingly, integration service providers effectively have two sets of customers—dealers (which must make the decision to authorize access) and app providers (which must make the decision to purchase the data access from the integration service provider). For brevity, I will refer to the primary function of integrators as providing access to dealers’ data, and to the primary function of app providers as using the dealers’ data to provide value-added services for the dealers.

4. As a result of certain restraints imposed by Defendants, many app providers have been foreclosed from using third-party integrators and have instead been required to purchase access to dealer data from the dealer’s DMS provider. A DMS provider that is open to third-party integrators promotes low app (integration) costs and thus low app prices for its dealers, which increases the value of the network for dealers relative to a DMS provider that disallows third-party integrators. The Challenged Conduct foreclosed access to data owned not by Defendants, but by dealers. I refer to the alleged arrangement between Defendants not to compete for integration services and to block third-party data integrators such as Authenticom as the horizontal restraint.

5. Based on my review of the limited evidence to date, the Challenged Conduct effectively foreclosed independent integrators from providing access to data

are “aftermarket restraints.” *See, e.g.,* Joseph Bauer, *Antitrust Implications of Aftermarkets*, 52(1) THE ANTITRUST BULLETIN 31, 32 (2007) [hereinafter “Bauer”] (“By ‘aftermarket restraints,’ I mean to include the array of techniques by which a firm selling . . . a product (or service or franchise)—which is frequently referred to as the ‘primary product’—is able to *require* its customers (or licensees or franchisees) to purchase some other product or service—oftentimes referred to as the ‘secondary product’—from that firm.”).

belonging to dealers utilizing Defendants' DMS to the integrators' app provider customers. By restraining substitution possibilities for both sets of integration service customers (dealers and apps), the Challenged Conduct likely permitted Defendants to raise prices for integration services to app providers above competitive levels, leading to higher app prices to dealers to the extent that app providers passed on all or a portion of the price hike to dealers.

6. To the extent that app providers' demand for data access declines as integration service prices rise—a reasonable assumption that can be further confirmed with Defendants' transaction data, or data from app providers—integration activity declined as prices rose, which would represent a reduction in output. Some vendors and dealers have confirmed that reduction in output.³ And despite Defendants' efforts to discourage app providers from passing through a portion of this price hike to dealers (via provisions prohibiting vendors from informing dealers about the data access fees, whether directly or indirectly), app providers did in fact pass along almost all of the price increase. App prices therefore rose to reflect the higher cost of integration, reducing the welfare of dealers. To the extent that dealers' demand for apps declines as app prices rise—another reasonable assumption that can be further confirmed with Defendants' transaction data, or data from dealers—app usage and purchases also declined relative to the but-for world, which would represent a separate reduction in output.

7. The Challenged Conduct has likely harmed app providers, direct consumers of dealer data integration services. As a result, app providers have faced massive increases in integration service fees—a necessary input for app providers—

3. See, e.g., Declaration of Michael Korp (Open Recalls) ¶¶ 28, 31 (May 12, 2017); Declaration of Wayne Fitkin ¶ 18 (Mar. 22, 2017).

which in turn has likely thwarted innovation and degraded the quality and availability of apps.

8. I have seen no evidence of offsetting improvements in the quality of integration service or the DMS platform, lower DMS prices, or some other plausible efficiency attributable to the Challenged Conduct. From the dealers' perspective, a balancing of the welfare loss from higher app prices (via pass-through of the integration price hike) against any purported efficiencies likely would result in a finding of net harm.

9. My report is organized as follows. In Part I, I lay out the economic framework for understanding the relationship between Defendants, Authenticom, app providers, and dealers. In Part II, I describe the nature of the Challenged Conduct. In Part III, I assess Defendants' payoffs from engaging in the Challenged Conduct. Part IV presents how, using direct evidence, an economist could analyze the net effect of the Challenged Conduct to dealers and to Authenticom at the merits phase. In Part V, I describe the relevant antitrust product markets, which can be understood as indirect evidence that Defendants, individually and collectively, had the ability to exercise market power.

QUALIFICATIONS

10. I am a principal at Economists Incorporated. I am also a senior fellow at The George Washington Institute for Public Policy and an adjunct professor at Georgetown's McDonough School of Business.

11. I am co-author of the e-book *The Need for Speed: A New Framework for Telecommunications Policy for the 21st Century* (Brookings Press 2013), and co-author of the book *Broadband in Europe: How Brussels Can Wire the Information*

Society (Kluwer/Springer Press 2005). I have published several book chapters, and my articles have appeared in dozens of legal and economic journals, including in several American Bar Association Antitrust Section journals.

12. I have testified before Congress on the interplay between antitrust and sector-specific regulation. Several of the antitrust cases in which I have testified raise similar issues to the instant matter, including *In re Ceridian Antitrust Litigation* (involving both horizontal and vertical restraints); and *Schuylkill Health et al. v. Cardinal and Owens & Minor* (involving vertical restraints imposed by two horizontal competitors). My scholarship and testimony have been widely cited by courts and regulatory agencies. In agency reports and orders, my writings have been cited by the Federal Communications Commission, the Federal Trade Commission, and the Department of Justice.

13. I earned M.A. and Ph.D. degrees in economics from the Johns Hopkins University and a B.S. degree *magna cum laude* in economics from Tulane University.

I. THE ECONOMIC FRAMEWORK FOR UNDERSTANDING THE RELATIONSHIP BETWEEN DEFENDANTS, AUTHENTICOM, APP PROVIDERS, AND DEALERS

14. Car dealers use DMSs to operate many aspects of their businesses, including data management. In particular, dealer data are stored on the DMS. With access to that data, app providers can offer dealers tools to perform various functions. Dealers select a single DMS as opposed to many, and make DMS-specific investments such as staff training⁴ that make it difficult for dealers to switch DMS providers⁵ and create

4. See, e.g., David Barkholz, *Reynolds Puts Scare in Illinois Store*, AUTOMOTIVE NEWS (Nov. 18, 2013) (“For a dealership to change dealer management system vendors, it typically takes at least a year of preparation, staff training and testing.”), available at <http://www.autonews.com/article/20131118/OEM06/311189945/reynolds--puts-scare-in-illinois-store>; David Barkholz, *Inside ‘Mission Impossible’: A DMS Change*,

barriers to entry for rival DMS providers.

15. The lines between the services that a DMS offers a dealer and the services that an app offers can be blurred. Examples of common DMS functions include payroll, accounting, factory communications, appointment scheduling, vehicle financing and insurance, sales, basic inventory management, basic service, and the storage of the car dealer's data. By comparison, common apps include customer-relationship-management apps, marketing apps, inventory-management apps, and repair-order apps. As a general rule, a DMS offers dealers core functionality (that is, things that dealers must do to survive), whereas apps offer ancillary functionality (that is, things that dealers can do to

AUTOMOTIVE NEWS (Jan. 13, 2014) ("Ideally, Lou Bachrodt Chevrolet would have taken a year preparing to switch DMS vendors, said Bachrodt. That's the time it typically takes to compare vendors and their systems, negotiate the capabilities needed and test the selection in various parts of the dealership."), *available at* <http://www.autonews.com/article/20140113/RETAIL/301139967/inside-mission-impossible:-a-dms-change>; David Barkholz, *DMS Dilemma: Why It's So Hard to Switch*, AUTOMOTIVE NEWS (May 10, 2010) ("The switch . . . required the retraining of . . . 25 employees over several weeks The dealer also had to pay \$50,000 upfront for new servers to run the software. . . . Changing providers of the dealer management system, or DMS, is akin to a heart transplant. . . . [Borcherding] had been with Reynolds for more than two decades and was in the fifth year of an eight-year contract."), *available at* <http://www.autonews.com/article/20100510/RETAIL07/305109976/dms-dilemma:-why-its-so-hard-to-switch>.

5. Letter from Elliott Management Corp. to CDK Board of Directors at 3 (May 4, 2016) [hereinafter *Elliott Letter*] (CDK "generates a highly attractive annuity stream through its subscription-based suite of software applications and enjoys a *sticky*, diverse customer base with an average DMS client tenure of 20 years. This customer *stickiness* is driven by the mission-critical nature of its DMS offering, the quality of its products and CDK's long-term customer contracts—all of which make CDK's subscription revenue stream grow nicely during good times while remaining incredibly resilient during economic downturns.") (emphasis added), *available at* <http://elliott-graphics.com/CDKletter.pdf>; Value Investors Club, CDK Global Inc. (Jan. 9, 2015) [hereinafter *Value Investors*] ("Some customers have been with CDK for 20+ years."), *available at* https://www.valueinvestorsclub.com/idea/CDK_Global_Inc./136077#description. In economic parlance, there is a high degree of customer "lock-in" to one platform. *See, e.g.*, Bauer at 43-44; Declaration of Brian Maas, President of the California New Car Dealers Association ¶ 7 (May 15, 2017).

increase profits).⁶

16. To provide services to the dealer, most apps require access to the data that the dealer stores in its DMS database.

17. As long as dealers are able to provide their data to third-party integration service providers, the presence of competitive third-party integrators allows app providers to access a dealer's data at competitive rates. In particular, so long as an independent path to a dealer's data existed, DMS suppliers could not impose supra-competitive integration service charges on app providers; as a result of this competitive constraint provided by independent integrators, DMS providers were unable to appropriate the economic surplus created by app providers. By contrast, when DMS providers block third-party access to dealer data stored on the DMS, app providers are forced to purchase data access from the DMS provider, potentially at supra-competitive rates. This provides a mechanism for economic harm not just to app providers, but also to

6. In addition to their DMS products, both CDK and Reynolds sell a number of applications that compete directly with third-party providers that require DMS integration. For example, CDK sells a Customer Relationship Management ("CRM") product and significantly raised DMS data access rates on at least one CRM competitor. CDK and Reynolds partner in a joint venture, CVR, which sells electronic vehicle registration services. Providing EVR services requires access to DMS data. When one of the significant competitors to CVR applied for certification, CDK demanded between 25 and 33 percent of topline revenue. See CDK Global, Inc., *CDK CRM – Automotive Customer Relationship Management*, <http://www.cdkglobal.com/solutions/cdk-crm>; Computerized Vehicle Registration, *Home*, <http://cwrweb.com/> ("CVR, backed by CDK Global and Reynolds & Reynolds . . ."); Vince Bond Jr., *'Held Hostage': Dealer's Battle with Software Giants Escalates*, AUTOMOTIVE NEWS (Dec. 26, 2016) [hereafter "Bond"] ("Walters said his eight stores have been using desking and customer-relationship management tools from VinSolutions, which is owned by Cox Automotive. Reflecting CDK's data surcharge, VinSolutions is adding around \$2,400 to the monthly bills of his dealerships for both products. He said the fees kicked in earlier this year."), available at <http://www.autonews.com/article/20161226/RETAIL07/312269969/dealer-asks-nadas-help-in-dms-dispute>; Email from Mike Joza, CDK, to Napa Bulusu, MVSC (Sept. 13, 2016) ("The integration pricing is still 25% of the revenue generated.").

dealers to the extent that app prices are higher or the quality and quantity of app services is diminished (or both). As described in the next section, the Challenged Conduct blocked third-party integrators' access to dealer data, and thereby eliminated competition in integration services.

II. THE NATURE OF THE CHALLENGED CONDUCT

18. The Challenged Conduct can be thought of as a series of restraints involving the individual Defendants' agreements with their respective customers (vertical restraints) and agreements between Reynolds and CDK (horizontal restraints). The restraints, including the blocking of independent integrators' access to dealer data, can be understood as a mechanism to ensure that both Defendants would block or impede third parties' access to dealer data that Defendants do not own. In this section, I describe the restraints and blocking conduct. In Part III, I explain the payoffs associated with the two restraints.

A. Vertical Restraints

19. Defendants have used various types of vertical restraints to restrict customers' ability freely to choose integration services and apps.

20. Both Reynolds and CDK effectively linked or tied their integration service to their DMS by technology and by contract. Starting with the former, first Reynolds then CDK blocked third-party integrators' automated retrieval of a dealer's data, and disabled user credentials (profiles) that were issued by dealers to data integrators that enabled pulling data ("polling") and pushing data back into the database ("write back").⁷ These

7. See, e.g., The Reynolds and Reynolds Company, *Announcing Important Change to Third-Party Automated Access into ERA* ("When a user's activity is identified as automated access, they will receive this error message on screen at their next login

tactics impaired the ability of independent integrators to compete, granting an advantage to DMS-affiliated integration.⁸ The blocking was exclusionary in the sense that it allowed Defendants to acquire and maintain monopolies in their respective integration aftermarkets. Moreover, the other vertical restraints (described below) would not be as effective if Defendants did not enforce them through constant blocking.

21. Both Reynolds and CDK also linked their integration service to their DMS service via exclusive contracts with dealers and app providers. In the absence of restraints, third-party integrators can access dealer data directly with the dealer's authorization. Defendants' exclusive contracts with dealers purport to restrict dealers' right to grant such authorization. Moreover, Defendants' exclusive contracts with app providers in any event bar app providers from doing business with third-party integrators as a condition of purchasing integration services from Defendants.

22. With respect to dealers, CDK's contracts prohibited the dealer from

attempt: USER ID DISABLED DUE TO AUTOMATED ACCESS ATTEMPTS”), available at http://www.reyrey.com/solutions/data_management/Automated_Access_To_ERA.asp; Bond, *supra* (“In the past, a dealer would provide a username and password to a vendor so it could get into the DMS and pull whatever data it needed. But Reynolds’ move to limit access solely to certified vendors threw a wrench into the day-to-day operations of some stores. . . . CDK appears to be following in Reynolds’ surcharge footsteps.”). *See also, e.g.*, Declaration of Brian Maas, President of the California New Car Dealers Association ¶ 17 (May 15, 2017).

8. *See, e.g.*, Declaration of Wayne Fitkin ¶ 11 (Mar. 22, 2017) (“Without the work-around I created, Authenticom would not be able to access any data from the DMS; in turn, Authenticom would not be able to transmit this data to application providers that rely on this data to provide necessary services for Walter’s Automotive Group. This would cause severe disruption to Walter’s Automotive Group’s operations.”); *id.* ¶ 15 (“It is my understanding that third-party application providers needed the certainty that the data would not be interrupted, and so felt compelled to join CDK’s program.”). *See also* Part IV.D, *infra* (reviewing evidence of market exit by independent integration providers).

permitting any form of integration other than CDK integration.⁹ CDK has been willing to enforce this provision against dealers.¹⁰ CDK offers integration services for CDK’s DMS via a service called Third Party Access (“3PA”). CDK’s 3PA contract with app providers requires that the app provider deal exclusively with CDK for integration, by prohibiting the app provider from accessing dealer data residing in the CDK DMS by any means other than through 3PA.¹¹

9. CDK Global, Master Services Agreement at 6B (July 1, 2015) (“[REDACTED]”); *id.* at 6D (“[REDACTED]”). *See also* Case #122030606, Beatrice Ford Lincoln Mercury (Dec. 2, 2016) (where a CDK representative identifies these two provisions in CDK’s DMS contract that prohibits dealers from granting Authenticom access to the data).

11. Redacted CDK 3PA Third Party Access Agreement at 2(e) (“[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].”).

exclusivity provisions, Reynolds will not certify the provider's applications and will continue to block access to the car dealer's data.¹³ Reynolds enforces these provisions against app providers.¹⁴ Reynolds is also willing to threaten third-party integrators directly: In April 2015, Reynolds threatened Authenticom with interfering with Reynolds' exclusive dealer contracts.¹⁵

24. Defendants' vertical restraints on dealers can also be understood as a tying arrangement. As a condition of purchasing Defendants' DMS services (the tying product), Defendants require dealers to use Defendants' dealer data integration services (the tied product), while prohibiting dealers from contracting to use dealer data

13. 2013 Reynolds Interface Agreement at 2.5.3 (“[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].”); *id.* at 2.5.3.1 (“[REDACTED]
[REDACTED].”); *id.* at 1.9 (“[REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED].”); *id.* at 1.10 (“[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].”). *See also* 2010 Reynolds Interface Agreement, presented to Polk, at 2.5.3 (“[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].”).

14. Letter from R&R to Data Software Services, LLC at 1 (Aug. 19, 2016) (“[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]”). The letter also sought a \$100,000 payment as a form of liquidated damages.

15. Letter from Robert Schaefer of R&R to Steven Cottrell (Apr. 6, 2015) (“As you know, the kind of unauthorized system access that Authenticom encourages in its white paper is, in short: contrary to Reynolds’ security policies, compromises the operational integrity of Reynolds’ system and, perhaps most importantly, violates the agreements that Reynolds enters into with its dealership customers.”).

integration services from third parties.

25. Finally, app providers faced provisions that limited their ability to pass through increased integration fees to dealers, and that barred app providers from identifying Defendants' integration charges as the reason for any fee hikes they did impose. In some cases, app providers were barred from including any integration fees on their invoices to dealers; in others, they were prohibited from attributing integration fees to Defendants via price-secrecy provisions.¹⁶ These restrictions on customers (hence, a vertical restraint) are understood in the economics literature as anti-steering provisions; in the absence of such restraints, an app provider could seek to induce a dealer to switch from DMS 1 to DMS 2 by offering a relatively lower price for its app on DMS 2. While the restrictions permitted apps to raise prices generally to dealers, the app providers could not impose a surcharge that was specific to the DMS that was raising its integration fees.

B. Horizontal Restraints

26. Plaintiff alleges that Defendants agreed not to compete in providing integration services. I understand that, for many years, CDK had provided data integration services for dealers using the Reynolds DMS, competing directly with Reynolds' own RCI integration product. In February 2015, however, CDK and Reynolds

16. See CDK 3PA Contract § 10 (Vendors "[REDACTED]

[REDACTED]"); RCI Contract § 2.7 (prohibiting vendors from disclosing any terms or conditions of the contract—including the pricing paid for the data integration services—to any party, including dealers).

entered into a written agreement whereby CDK agreed that it would no longer compete in providing access to dealer data on the Reynolds DMS, ceding that ground exclusively to Reynolds. I understand that Reynolds already did not compete with CDK in providing access to data for dealers using the CDK DMS. The agreement therefore ensured that CDK and Reynolds would no longer compete in providing data integration on each other's platforms. This arrangement is a horizontal (as opposed to vertical) restraint because Reynolds and CDK are direct competitors both in the supply of DMS platforms and at least potential competitors in the provision of integration services. In a letter to customers explaining its arrangement with Reynolds, CDK and its affiliated integration provider, Digital Motorworks, Inc. (DMI) stated:

CDK Global has entered into a business agreement with The Reynolds and Reynolds Company (R&R) that will provide DMI customers with a streamlined, supported process for handling dealership data for your R&R dealers. . . . Under this new agreement, CarProof will be provided with a roadmap to transition to the Reynolds Certified Interface (RCI) program without any further risk of interruption to existing services.¹⁷

Reynolds followed up on CDK's letters by advising app customers using CDK's integration that, in order to poll data from Reynolds dealers, they would need to become a certified member of the RCI program.¹⁸

27. Plaintiff alleges that Defendants also agreed not to permit third-party integrators such as Authenticom to pull data from dealers' DMS databases. For example, CDK and Reynolds agreed to effectively "lock you [Authenticom] and the other third

17. Letter from Digital Motorworks, Inc. to CarProof Vehicle History Reports (Mar. 2, 2015).

18. *See, e.g.*, Letter from James Burton, Senior Vice President, Field Operations for AutoAlert, to Raul Krakowski of Dublin Hyundai (May 20, 2015) (000268) (explaining that DMI would serve as a "transition agent" to provide data without interruption, but that any questions should be relayed to Reynolds).

parties out.”¹⁹ According to the complaint, at an industry conference in February 2016, CDK’s Dan McCray told Authenticom, Inc.’s Steve Cottrell: “I have been mandated by our new CEO to seek you out and destroy your business on our systems.”²⁰

III. DEFENDANTS’ PAYOFFS ASSOCIATED WITH THE TWO RESTRAINTS

28. Defendants had a strong economic motivation to engage in the horizontal and vertical restraints, including blocking activities. As demonstrated in this section, both sets of restraints supported the price increases for affiliated integration services. This harms dealers via pass-through. Dealers are also harmed by a diminution in the quality and availability of app services. To the extent that the horizontal restraints not only restricted competition for integration services but also restricted competition for DMS—for example, by reducing differentiation and potentially providing CDK with a foothold to attract Reynolds’ customers to its own DMS—the Challenged Conduct can also be understood to preserve Defendants’ market power in DMS services.

29. To understand how the restraints affected Defendants’ profitability, one must first understand the nature and impact of the price increases. As explained further below, I understand that Reynolds has attempted to block third-party integrators’ access to dealer data in earnest at least since 2011. That Reynolds has left its vertical restraints in place throughout that period strongly suggests that those restraints increased the company’s profitability. Economics can be used to further assess the incremental impact of each restraint on profitability.

30. Before 2007, Reynolds charged on a monthly basis less than \$100 per

19. Authenticom Compl. ¶¶ 10, 180-181.

20. *Id.* ¶ 180.

application per site for integration service.²¹ As early as 2007, Reynolds had begun blocking app providers from accessing dealer data and including exclusionary language in its contracts with dealers.²² In August 2011, Reynolds announced it was “cutting access by noncertified vendors to its DMS in an effort to tighten security.”²³

31. In the presence of these vertical restraints, by 2013, Reynolds raised its monthly prices for integration per connection from less than \$100 to between \$300 and \$500.²⁴ This constitutes a price increase in the range of 200 to 400 percent in the price of integration services, one of the relevant antitrust product markets here.²⁵

32. Reynolds’ price hike also represents a substantial percentage of the total monthly revenue for each DMS customer. This can be thought of as effectively increasing the cost to dealers of using Reynolds’ DMS. Given Reynolds’ average

21. A Question on DMS Integration—The StoneEagle Group Responds (Jan. 26, 2012) (“Even a small dealer is doing business with as many as five outside product vendors. If all five are forced to certify their products and pay (for an example) \$100 in fees, those fees are inevitably passed on to the dealer.”), available at <http://pa-magazine.com/dms-integration-2/a-question-on-dms-integration/>. A more precise estimate of Reynolds’ integration price will be available upon discovery. This exercise is meant to be illustrative.

22. See Kisiel 2008, *supra* (“Reynolds, on the other hand, is blocking third party vendors from accessing a dealership’s modem. Reynolds told dealerships that they are violating their contract by providing user IDs and passwords to those vendors. For a fee, Reynolds will extract whatever data a third party needs from a dealer’s system”)

23. See Bond, *supra*.

24. DrivingSales News, *The Hidden Data Tax That Dealers Don’t Know They Are Paying*, DRIVINGSALES (Oct. 17, 2013) [hereafter “DrivingSales”] (“In those documents, SIS alleges that Reynolds charges vendors up to \$50,000 upfront, plus an additional setup fee of \$500 per store and another \$300 – \$500 in monthly fees per connection.”), available at <http://www.drivingsales.com/news/the-hidden-data-tax-that-dealers-dont-know-they-are-paying-2/>. Again, a more precise estimate of Reynolds’ integration price will be available upon discovery.

25. See Part V, *infra*.

monthly revenue per DMS client of approximately \$8,250 in 2014,²⁶ a \$300 per application price hike to app providers (equal to \$400 less \$100) amounts to a 36 percent price increase to dealers (equal to $\$300 \times 10$ divided by \$8,250), assuming (1) that dealers support an average of 10 applications on their platforms;²⁷ and (2) that integration charges are incurred once per month; and (3) the price hike for integration services is fully passed on to dealers.

33. The foregoing illustration assumes that all price increases were fully passed through; the available evidence suggests that pass-through was substantial, albeit less than 100 percent on average.²⁸ In any case, a lower pass-through rate would tend to

26. *Value Investors, supra* (noting that CDK is underpricing Reynolds by “as much as 20%”); CDK Global Reports Second Quarter Results and Updates FY 2017 Outlook; Provides Return of Capital and Leverage Targets through Calendar Year 2019 [hereinafter *CDK Investor Release*] (showing CDK’s average monthly revenue per dealer site equal to \$6,600 in 2014), available at <http://investors.cdkglobal.com/phoenix.zhtml?c=253732&p=irol-newsArticle&ID=2241595>.

27. See, e.g., David Barkholz, *Dealers Will Pay Up for Vendors’ Data Access After CDK Switch*, AUTOMOTIVE NEWS (July 20, 2015) (“[S]tore employees have come to rely on as many as 10 software vendors.”), available at <http://www.autonews.com/article/20150720/RETAIL07/307209962/dealers-will-pay-up-for-vendors-data-access-after-cdk-switch>; DrivingSales, *supra* (“When you think of all the tools that dealerships use today such as CRM, Inventory Pricing, Reputation Management, Websites, Equity Mining, Desking etc., it’s easy to see that the number of connections each dealership has widely varies, but could feasibly be three to 10 connections or more, depending on how many various tools the dealership has purchased.”). See also Declaration of Chris Longpre (Lexus of Westminster) ¶ 6 (Apr. 4, 2017) (noting that his dealership uses roughly 20 third-party apps); Declaration of Wayne Fitkin ¶ 5 (Mar. 22, 2017) (noting that his dealership uses roughly 50 third-party apps); Declaration of Michael Korp (Open Recalls) ¶ 25 (May 12, 2017) (noting that his dealerships use roughly a dozen third-party apps).

28. See Part IV.B, *infra* (citing evidence that app providers frequently passed through the integration price hike to dealers, despite Defendants’ attempt to discourage pass-through). According to basic economic principles, a large and widespread cost increase, such as that imposed by Defendants, would have placed very substantial pressure on app providers to pass on at least a portion of the integration price hike to dealers. See, e.g., Jerry Hausman & Gregory Leonard, *Efficiencies from the Consumer Viewpoint*, 7 GEORGE MASON LAW REVIEW 707 (1999) (showing pass-through rates under a variety of

make Reynolds' price hike more profitable: Because a lower pass-through rate would make dealers less likely to switch to a competing DMS as a result of the integration price hike, a lower pass-through rate would be less likely to put Reynolds' DMS revenues in jeopardy.

34. I understand that CDK began entering into exclusive contracts with app providers (the vertical restraints) with revised 3PA contracts. After the horizontal restraints were in place in early 2015, CDK raised its integration prices from approximately \$70 per application per site to \$250 to \$300 in June 2015.²⁹ This constitutes an increase in the range of 257 to 329 percent in the price of integration

market conditions). Indeed, industry analysts expected and observed a high pass-through rate. *See, e.g.,* Cliff Banks, *Data Access Battle Goes Nuclear*, THE BANKS REPORT (Oct. 12, 2015) ("Meanwhile, dealers could soon be paying much higher prices for the services of their third party vendors."), available at https://www.dealervault.com/img/video-thumbs/TBR_Data_Access_15.pdf; Cliff Banks, *CDK, Reynolds and Reynolds Sued for Alleged Antitrust Practices*, THE BANKS REPORT (Feb. 4, 2017) ("Vendors have started passing those costs down to the dealers. Today, the industry has a situation where dealers are paying multiple vendors as much as \$600 to \$700 each a month just to access their own customer data."), available at <http://www.thebanksreport.com/legalpolitical/cdk-reynolds-reynolds-sued-antitrust-practices/>; *see also* Bond, *supra* ("The added expense for third parties is then passed to their dealer clients," wrote Mitch Walters, president of the Friendship Family of Dealerships in Bristol, Tenn., in a Dec. 20 letter to NADA President Peter Welch."); Declaration of Chris Longpre (Lexus of Westminster) ¶ 7 (Apr. 4, 2017) ("As a result of CDK's integration fees, DealerSocket has informed me that they are raising the price it charges my dealership by \$500 per month.").

29. David Barkholz, *Dealers Will Pay Up for Vendors' Data Access After CDK Switch*, AUTOMOTIVE NEWS (July 20, 2015) ("CDK said it intends to charge each third-party vendor in SecurityFirst between \$250 and \$300 a month per store for each software product. The current fees average about \$70 per software product, the vendors said."), available at <http://www.autonews.com/article/20150720/RETAIL07/307209962/dealers-will-pay-up-for-vendors-data-access-after-cdk-switch>. Some application providers reported substantially larger price increases, with one CRM provider citing a price increase from \$50 per month to \$600. Under CDK's SecurityFirst initiative, the combined price paid by a dealer for a standard slate of seven popular software products was set to rise from \$475 per site to \$1,600. *Id.* *See also* CDK Global, Inc., Press Release, *CDK Global Launches Security-Focused Program for Automotive Retail* (June 22, 2015), available at <http://www.cdkglobal.com/company/media-center/cdk-global-launches-security-focused-program-automotive-retail>.

services, one of the relevant antitrust product markets here.³⁰

35. CDK's price hike also represents a substantial percentage of the total monthly revenue for each customer location; again, this can be thought of as a substantial increase in dealer costs. Given CDK's average monthly revenue per DMS client of approximately \$6,600 in 2014,³¹ a \$205 per application price hike (equal to \$275 less \$70) to app providers amounts to a 31 percent price increase to dealers under the same set of assumptions (equal to \$205 x 10 divided by \$6,600). (As above, this calculation assumes that CDK's price hike was fully passed on to dealers; a lower pass-through rate would tend to make the price hike more profitable).

A. The Payoffs from the Horizontal Restraints

36. Horizontal restraints are generally designed to weaken substitution possibilities for consumers, and thus can be used to support a price increase. In the absence of a horizontal restraint, a price increase can trigger defection to the closest available substitute. Applied to the instant case, prior to the enactment of the horizontal restraints, I understand that Reynolds' price increases (in the pre-2015 timeframe) were met with a significant amount of dealer defection to CDK's platform.³² Even if Reynolds'

30. See Part V, *infra*.

31. *CDK Investor Release*, *supra*.

32. Authenticom Compl. ¶ 102; *see also* Ralph Kiesel, *ADP Provides Dealers 3 Options on Data Access*, AUTOMOTIVE NEWS (Feb. 19, 2007) (CDK executive stating, "We've experienced longstanding customers, whether they've been (with) Reynolds or UCS, who are saying, 'My contract's coming to term, and I'm going to take a look at ADP,'" Anenen said. "To that end, we see some uplift and we've enjoyed some market share that's come our way as a result of it."), *available at* <http://www.autonews.com/article/20070219/SUB/70215040/adp-provides-dealers-3-options-on-data-access>; Ralph Kiesel, *ADP: We're Taking Users from Reynolds*, AUTOMOTIVE NEWS (Feb. 11, 2008) (CDK reporting that, in six-month period, it gained five contracts with dealers switching from Reynolds for every contract it lost to Reynolds), *available at* <http://www.autonews.com/article/20080211/RETAIL06/302119990/adp-were-taking-users-from-reynolds>.

integration price increase were aimed at app providers, to the extent that app providers passed some or all of those price increases onto dealers, dealers would face an effective price increase for operating on the Reynolds platform relative to CDK's platform. Moreover, to the extent that some app providers left the Reynolds platform in response to the integration price hike, due to network effects—the value of the platform to the dealer increases with the number of unique app offerings—the CDK platform would become relatively more attractive to Reynolds' dealer customers. Finally, to the extent that dealers value access to Authenticom or other third-party integrators—low integration prices and superior service could induce greater choice of and lower prices charged by app providers—such openness would have made CDK relatively more attractive to dealers. Indeed, before the horizontal restraints were in place, CDK exploited this difference in its marketing to dealers.³³ Although CDK introduced its own third-party certification program, 3PA, in 2007, it offered tiered levels of options to dealers and continued to allow dealers to authorize access by third-party integrators.³⁴

37. A natural experiment that reveals the incremental value of the horizontal

33. See, e.g., Ralph Kiesel, *NADA, AIADA Weigh Reynolds Data Security Debate*, AUTOMOTIVE NEWS (Feb. 4, 2007) (quoting ADP Automotive Retail Group Vice President of Sales and Marketing Matt Parsons), available at <http://www.autonews.com/article/20070204/SUB/70203019/nada-aiada-weigh-reynolds-data-security-debate>; Ralph Kiesel, *Dealer Security Stirs Insecurity: Vendors Wary of Reynolds Plan for Computer Systems*, AUTOMOTIVE NEWS (Dec. 4, 2006), available at <http://www.autonews.com/article/20061204000100/SUB/61201031>?. Automotive dealership trade groups supported CDK's position. See NADA Press Release, *NADA, AIADA, Issue Joint Policy Statement on Data Accessibility* (Feb. 2, 2007), available at <https://www.nada.org/CustomTemplates/DetailPressRelease.aspx?id=21474842320>; see also Ralph Kiesel, *NADA, AIADA Weigh Reynolds Data Security Debate*, AUTOMOTIVE NEWS (Feb. 4, 2007), available at <http://www.autonews.com/article/20070204/SUB/70203019/nada-aiada-weigh-reynolds-data-security-debate>.

34. See, e.g., Ralph Kiesel, *ADP Provides Dealers 3 Options on Data Access*, AUTOMOTIVE NEWS (Feb. 19, 2007), available at <http://www.autonews.com/article/20070219/SUB/70215040/adp-provides-dealers-3-options-on-data-access>.

restraint is to compare (1) customer defection that met Reynolds' price hike (with just the vertical restraint in place) with (2) customer defection that met CDK's price hike (with both the vertical and horizontal restraints in place). Beginning with (1), it is my understanding that Reynolds could have lost up to 10 percent of its dealers in response to integration price hikes before 2015 and that the majority of the defecting dealers went to CDK.³⁵ Drawing from the tools of critical-loss analysis, a price increase of X percent is profitable if the actual loss in sales, L , is less than the critical loss in sales, $X / (m + X)$,³⁶ where m denotes the firm's percentage margin. The critical loss in sales can be thought of as the loss in sales that would just render the firm's price increase unprofitable. The numbers used in this calculation are meant to be illustrative—discovery should produce more detailed data regarding Reynolds' customer loss attributable to its integration price hike, as well as its margins before and after its price hike.

38. Shortly after its leveraged buyout in 2006, Reynolds' margins were thought to be around 20 percent.³⁷ According to Elliott Management Corporation ("Elliott"), which owns a minority stake in CDK, Reynolds' margin in North America in

35. Authenticom Compl. ¶ 102; *see also* Ralph Kisiel, *ADP Provides Dealers 3 Options on Data Access*, AUTOMOTIVE NEWS (Feb. 19, 2007) (CDK executive stating, "We've experienced longstanding customers, whether they've been (with) Reynolds or UCS, who are saying, 'My contract's coming to term, and I'm going to take a look at ADP,'" Anenen said. "To that end, we see some uplift and we've enjoyed some market share that's come our way as a result of it."), *available at* <http://www.autonews.com/article/20070219/SUB/70215040/adp-provides-dealers-3-options-on-data-access>; Ralph Kisiel, *ADP: We're Taking Users from Reynolds*, AUTOMOTIVE NEWS (Feb. 11, 2008) (CDK reporting that, in six-month period, it gained five contracts with dealers switching from Reynolds for every contract it lost to Reynolds), *available at* <http://www.autonews.com/article/20080211/RETAIL06/302119990/adp:-were-taking-users-from-reynolds>.

36. Steven Salop, Serge Moresi & John Woodbury, *Market Definition*, in ANTITRUST ECONOMICS FOR LAWYERS (forthcoming 2017), *available at* <http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=2966&context=facpub>.

37. *Value Investors*, *supra* ("REY clearly laid out the playbook when they increased margins from 20% to 51.7% shortly after their LBO.").

2015 (after its integration price hike) was 55 percent on sales of \$840 million.³⁸ Assuming complete pass-through, Reynolds' integration price hike of \$300 to app providers amounted to a price increase to dealers of approximately 36 percent. Assuming Reynolds' pre-price-hike margins of 20 percent in 2006, the critical loss given a 36 percent price hike was 64 percent (equal to $36/(20+36)$). Assuming Reynolds' actual loss in dealers was only 10 percent, it follows that the Reynolds' price hike was profitable. Alternatively, note that the percentage decrease in quantity (10 percent) was much less than the percentage increase in price (at 36 percent). This means that the response to Reynolds' price hike was inelastic and that the price hike was profitable. (At the merits phase, the critical-loss calculus can be refined based on Defendants' records.)

39. App providers may not have passed on 100 percent of the price hike to dealers. To the extent that app providers absorbed a portion of the integration price hike, they helped ensure that Defendants' price hike would be profitable; absorbing a portion of the price hike made dealers less likely to substitute away from Reynolds in response to the price hike. As noted in Part II, Reynolds inserted contractual provisions designed to minimize pass-through, indicating a clear preference for inducing app providers to avoid passing through the increase to dealers—or at least to spread the pass-through across as many dealers as possible, while masking its source. App providers could either (1) pay at least a portion of Reynolds' elevated data integration fees; or (2) cease to serve dealers on the Reynolds platform, allowing Reynolds to replace them with its own app services. These provisions presumably explain, at least in part, why Reynolds may have lost only a small percentage of its dealers in response to such a large price increase.

38. *Elliott Letter* at 9.

40. Importantly, Reynolds' price increase would have been even more profitable if it could have coordinated its exclusionary strategy with CDK. Prior to the horizontal restraints, CDK was providing integration service to some Reynolds (app) customers, and CDK's platform was open to third-party integrators; both features made CDK's platform relatively more attractive and less expensive to dealers. It is reasonable to assume that the Reynolds' defecting dealers, most of which ended up at CDK, would have been significantly less than 10 percent had the horizontal restraints been in place. It follows that (1) the price hike would have been significantly more profitable, and (2) Reynolds could have supported an even larger price increase in the presence of the horizontal restraints.

41. In contrast to Reynolds' experience, CDK's price increase was imposed after the horizontal restraints were in place. By limiting substitution possibilities this way, CDK was evidently able to raise integration prices *without any material customer defection*: Its number of dealer sites declined trivially from 9,210 in 2015 to 9,184 in 2016,³⁹ a drop of only 0.3 percent (compared to Reynolds' non-trivial dealer sites decline). Table 1 shows CDK's number of DMS client sites and average monthly revenue per site from 2013 through 2016.

39. CDK Global Reports Second Quarter Results and Updates FY 2017 Outlook; Provides Return of Capital and Leverage Targets through Calendar Year 2019, *available at* <http://investors.cdkglobal.com/phoenix.zhtml?c=253732&p=irol-newsArticle&ID=2241595>. CDK revised its September 2015 and December 2015 average-monthly-revenue-per-site estimates upwards by \$147 and \$139, respectively.

TABLE 1: CDK'S AVERAGE MONTHLY REVENUE PER SITE

Year	2013	2014	2015	2016
DMS Client Sites (1)	8,910	9,140	9,210	9,184
Average Monthly Revenue Per Client Site (2)	6,386	6,682	7,177	7,870
Revenue Growth		4.6%	7.4%	9.7%
Annual Automotive Revenue = (1) x (2) x 12 months	682,791,120	732,881,760	793,202,040	867,336,960
Top-Line Revenue Growth		7.3%	8.2%	9.3%

Source: CDK Reports Fiscal 2015 Results; Provides Fiscal 2016 Guidance, available at <http://investors.cdkglobal.com/phoenix.zhtml?c=253732&p=irol-newsArticle&ID=2072141>; CDK Global Reports Second Quarter Results and Updates FY 2017 Outlook; Provides Return of Capital and Leverage Targets through Calendar Year 2019, available at <http://investors.cdkglobal.com/phoenix.zhtml?c=253732&p=irol-newsArticle&ID=2241595>.

Notes: According to CDK, it calculates "average revenue per DMS client site by dividing the monthly applicable revenue generated from our solutions in a period by the average number of DMS client sites in the period."

As Table 1 shows, CDK's average monthly revenue per site in 2016 was roughly \$7,870, a \$693 increase on average from the prior year, or 9.7 percent. Given how CDK calculates its average revenue per dealer, however, it is not clear that dealers were contributing 9.7 percent more on average to CDK directly; some of that increase was likely attributable to CDK revenue from app providers.

42. Indeed, CDK adjusted its definition of average revenue per DMS customer site, beginning in September 2015, to "reflect new segments and now includes revenue generated from websites."⁴⁰ In its annual report, CDK attributes the increase in automotive revenues to "a combination of increased sales of new or expanded solutions to our existing customer base and pricing."⁴¹ This rapid revenue growth in the face of a price increase for integration suggests that demand for CDK's DMS platform, at least in

40. CDK Global Reports Second Quarter Results and Updates FY 2017 Outlook; Provides Return of Capital and Leverage Targets through Calendar Year 2019, available at <http://investors.cdkglobal.com/phoenix.zhtml?c=253732&p=irol-newsArticle&ID=2241595>. CDK revised its September 2015 and December 2015 average-monthly-revenue-per-site estimates upwards by \$147 and \$139, respectively.

41. CDK Global, Inc., SEC Form 10-K at 45 (Fiscal Year Ended June 30, 2016).

the presence of CDK's horizontal and vertical restraints, was not so sensitive as to render CDK's price increase unprofitable. Discovery of CDK's sale of integration services before and after the company's integration price increase will provide further insight into the elasticity of demand among app providers.

43. Alternatively, one can use the tools of critical-loss analysis to determine whether CDK's price hike to app providers was profitable. According to Elliott, CDK's North American margins in 2015 were 30 percent, compared to Reynolds' margin of 55 percent in the same year.⁴² As demonstrated above, CDK's \$205 price increase to app providers effectively increased dealer prices by 31 percent assuming complete pass-through; the critical loss associated with such a price increase is 51 percent (equal to $31/(30+31)$), which vastly exceeds the actual loss of 0.3 percent, rendering the price increase profitable. Indeed, CDK's price hike was profitable so long as it effectively increased dealer prices by at least 0.1 percent.⁴³ Alternatively, note that the percentage decrease in quantity (0.3 percent) was much less than the percentage increase in price (31 percent). This means that the response to CDK's price hike was inelastic and that the price hike was necessarily profitable.

B. The Payoffs from the Vertical Restraints

44. The vertical restraints (accompanied with enforcement through blocking of third-party data integrators) allowed Defendants to extract monopoly rents in a way that would otherwise not be possible, thereby increasing Defendants' profits. In the absence of these restraints, Defendants were limited to capturing the competitive rate for

42. *Elliott Letter* at 2. Value Investors arrived at a similar margin comparison in January 2015. *See Value Investors, supra* ("[Reynolds] has an EBITDA margin of 51.7% versus CDK's EBITDA margin of 21%.").

43. $0.1/(30+0.1) = 0.33$ percent.

integration among a subset of app providers doing business with their DMS clients; with the restraints, Defendants were able to raise integration prices to supra-competitive levels to the entirety of their DMS customers' app providers. In addition, Defendants further profited to the extent that their own apps displaced competing apps that were disadvantaged by the integration price hike.⁴⁴ Of course, if the vertical restraints here had been motivated for efficiency reasons, then those efficiencies should have manifested themselves in the form of lower costs, lower prices, and greater output—precisely the opposite of what the available evidence indicates. Based on my review of the preliminary evidence, the vertical restraints appear to lack a procompetitive justification.

45. A natural experiment that reveals the incremental value of the vertical restraints is the series of Reynolds price hikes over the years 2011 (when Reynolds began to block in earnest CDK and other independent integration providers⁴⁵) through 2015. As

44. To the extent that dealers use varying amounts of apps (or DMS) (two “market-power effects”), or the competitiveness of apps (or DMS) is not fixed (two “foreclosure-share effects”), Defendants would have a fresh incentive to increase profits via vertical restraints generally and tie-ins in particular. See Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARVARD LAW REVIEW 397 (2009), available at <http://harvardlawreview.org/2009/12/tying-bundled-discounts-and-the-death-of-the-single-monopoly-profit-theory/>. Elhauge explains that, under the quasi per se rule for tie-ins, a plaintiff must show (1) tying market power and (2) lack of offsetting efficiencies, but not (3) substantial tied foreclosure share; foreclosure-share effects are needed only when market-power effects are not viable. *Id.* While the relevant conditions cannot be fully informed without discovery, based on the limited record that I have reviewed, all four theories are viable.

45. Reynolds System Announcement, *Announcing Important Change to Third-Party Automated Access into ERA* (“Effective immediately, Reynolds will begin the rollout of prohibiting automated access into ERA®. This will impact any process that is set up to directly access ERA without any manual intervention.”), available at http://www.reyrey.com/solutions/data_management/Automated_Access_To_ERA.asp; IntegraLink Corp., *Smart-R for Reynolds ERA Dealers* (“Reynolds and Reynolds has instituted policies designed to prevent automated processes such as those used by IntegraLink and other third-party data-collection services from collecting data”), available at https://il.dmotorworks.com/downloads/smartR/SMART-R_FAQ.pdf.

shown above, Reynolds reaped substantial profits from the price hike, despite its losing a non-trivial percentage of its dealer customers. Based on publicly available data, by 2013, two years after it began to block independent integration providers, Reynolds raised integration prices from \$100 to between \$300 and \$500.⁴⁶ In the absence of the vertical restraints, Reynolds likely could not have raised prices this way, as third-party integrators would have stepped in to provide a comparable service at lower prices.

46. Integration service has been (until recently) a competitive business: The product that integration providers offer—access to dealership data—is not highly differentiated. Moreover, the cost to a dealership of switching from one integration provider to another is low.⁴⁷ As a consequence, there have been (until recently) many third-party integrators offering competitively priced alternatives.⁴⁸ Competitive monthly fees for integration service ranged from about \$10 to \$100 per connection, depending on type and frequency of data that application providers require.⁴⁹ For example,

46. DrivingSalesNews, *The Hidden Data Tax That Dealers Don't Know They Are Paying*, DRIVING SALES (Oct. 17, 2013) (“SIS alleges that Reynolds charges vendors up to \$50,000 upfront, plus an additional setup fee of \$500 per store and another \$300 – \$500 in monthly fees per connection.”), available at <http://www.drivingsales.com/news/the-hidden-data-tax-that-dealers-dont-know-they-are-paying-2/>.

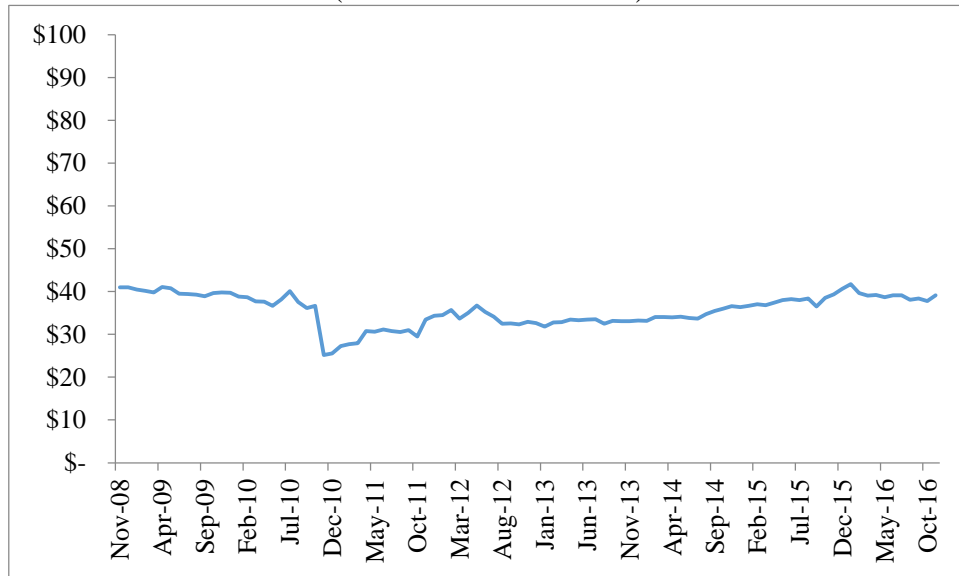
47. DrivingSales, *supra* (noting that integration providers charge “an upfront setup fee of a couple hundred dollars”).

48. *Id.* (“Integration companies are like middlemen for dealership DMS data. These companies are in the business of writing programs that pull data from the DMS systems and pass it to the third-party systems; sometimes this is referred to as DMS polling. Historically, they have been by far the cheapest option for CRM companies and others to use to get the information they need from the DMS. There are many companies who fill the Integration Partner role such as Authenticom, Superior Integrated Solutions, Inc. (SIS), Ryan Tech (who recently sold its DMS polling business to Authenticom), Digital Motor Works, Inc. (or DMI), and others.”).

49. *Id.* (explaining that integration providers charge “an upfront setup fee of a couple hundred dollars and an ongoing monthly fee that ranges from approximately \$10 – \$100 per connection” and that “[t]he monthly fee will range based how often the data needs to be shared and exactly what data is passed along between the DMS and the third party”).

Authenticom's average monthly subscription revenue has consistently hovered in the range of approximately \$30 to \$40 per connection, as seen below.⁵⁰

FIGURE 1: AUTHENTICOM COMBINED AVERAGE MONTHLY SUBSCRIPTION REVENUE
(Nov. 2008- Nov. 2016)



Source: Authenticom's P&L Statements (P&L Information - 12.27.2016.xlsx).

Had Authenticom tried to raise prices above these levels, it likely would have faced a swift defection of app-provider customers to rival integration providers (at least during the period when the market was competitive).

50. Defendants may argue that, while they offer polling and pushing, Authenticom does only the former, so the prices are not comparable. Authenticom did briefly offer pushing, but it was prevented from offering pushing services more broadly by Defendants' blocking. Even if one adds Authenticom's price for pushing, Authenticom's total price for such bi-directional access was at most \$75 per month. That is still far below the rates that CDK and Reynolds charge, as explained *infra*.

IV. DIRECT EVIDENCE OF HARM TO COMPETITION AND TO AUTHENTICOM

47. As demonstrated below, the Challenged Conduct likely harmed app providers and dealers. Not only were integration and app prices inflated by the Challenged Conduct, but also output—in terms of integration activity, app usage, and the quality and quantity of app services available to dealers—likely declined.⁵¹ The harm incurred by independent integrators such as Authenticom was also caused by the Challenged Conduct.

A. Harm to App Providers

48. With independent access to dealer data effectively blocked by the Challenged Conduct, Defendants were able to charge supra-competitive prices to app providers for access to dealer data. The prices for integration charged by independent firms such as Authenticom (\$30 to \$40 per connection between 2008 and 2016) and Superior Integrated Solutions (SIS), another independent integration service provider that was forced to exit the integration market for Reynolds dealers in 2016⁵² (\$40 to \$50 per connection between 2008 and 2013),⁵³ are a reasonable proxy for competitive rates. Prior to imposing vertical restraints on dealers and app providers, CDK charged \$70 per application per site, which was close to competitive levels.⁵⁴ A final proxy for the

51. Economic theory suggests that, for most products, quantity demanded declines with price. Such output effects, which are supported by anecdotal evidence at this stage, can be quantified on an industry-wide basis during discovery. *See* Declaration of Michael Korp (Open Recalls) ¶¶ 28, 31 (May 12, 2017); Declaration of Wayne Fitkin ¶ 18 (Mar. 22, 2017).

52. Letter from Christopher Grimes, Chief Product Office, Superior Integrated Solutions, to DMV Desk (Aug. 30, 2016) (“[W]e must terminate our direct CDK DMS integration offerings.”).

53. Authenticom Compl. ¶ 215.

54. *See, e.g.,* David Barkholz, *Dealers Will Pay Up for Vendors’ Data Access After CDK Switch*, AUTOMOTIVE NEWS (July 20, 2015), available at

competitive rate is what CDK currently charges for integration at non-CDK, non-Reynolds dealers (\$25 to \$50).⁵⁵ Reynolds' and CDK's post-restraints prices of roughly \$300 per connection per month constitute a 650 percent premium over competitive rates (equal to $6.5 \times \$40$ plus \$40). In a competitive industry, no integration provider could command such a premium over competitive rates; its customers would easily switch to cheaper alternatives to access dealer data.

49. I am not aware of any concomitant increase in quality or non-price benefits offered by Defendants to app providers (or dealers) that would offset the price hike for app providers. To the contrary, the available evidence suggests that Defendants' purported security enhancements did not entail substantive changes—other than the price hike itself.⁵⁶ In addition, I have seen no evidence that the quality of Defendants' integration offering in terms of security, dealer control and visibility over data extraction, and data accuracy are somehow superior to that of Authenticom or other independent integrators. That Authenticom attracted customers in the absence of the restraints indicates that its quality-adjusted price was considered by many consumers to be superior.⁵⁷ Moreover, the quality of Defendants' offerings would have had to increase very substantially to compensate for the large integration price hike. I have seen no

<http://www.autonews.com/article/20150720/RETAIL07/307209962/dealers-will-pay-up-for-vendors-data-access-after-cdk-switch>.

55. Authenticom Compl. ¶¶ 95, 219.

56. See, e.g., David Barkholz, *Dealers Will Pay Up for Vendors' Data Access After CDK Switch*, AUTOMOTIVE NEWS (July 20, 2015) ("Vendors briefed on CDK's new data-security program said nothing will change in the way they get data from CDK-served DMS dealerships under SecurityFirst except for a higher price. Prices generally will go up for 120 vendors currently in CDK's vendor-access program."), available at <http://www.autonews.com/article/20150720/RETAIL07/307209962/dealers-will-pay-up-for-vendors-data-access-after-cdk-switch>.

57. Declaration of Chris Longpre (Lexus of Westminster) ¶ 10 (Apr. 4, 2017) ("If I had my choice, I would use Authenticom's DealerVault service for all of my vendors.").

evidence of such an increase.

50. Finally, the no-surcharge provisions in Defendants' agreements with app providers frustrated, at least in part, app providers' ability to pass through the integration-cost increases to dealers, and also encouraged any pass-through to be spread among all dealers, disguising the source of the price increase to dealers. Spreading out the price increase this way also makes the demand response by dealers less elastic (because the app price they pay will be the same irrespective of the price of integration services) and is therefore a more effective exercise of market power.

B. Harm to Dealers

51. Despite the price secrecy provisions, higher access prices to app providers are generally passed through to dealers in the form of higher app prices.⁵⁸ In the absence

58. See, e.g., Letter from Mitch Walters, Friendship Enterprises, to Peter Welch, National Automobile Dealers Association (Dec. 20, 2016) ("The third party vendor then is compelled to pass this unfair charge or assessment to the dealer who created the data in the first place."), available at https://www.scribd.com/document/335170418/Letter-to-NADA-s-Peter-Welch#fullscreen&from_embed; Bond, *supra* ("Dealers are taking a financial hit. . . . Some dealers haven't yet caught on to the price hikes because CDK is hiking vendor contracts in order of expiration. . . . 'Now they're charging Cox, and Cox is charging us \$150 a store. That's \$1,200 per month, per product,' Walters told Automotive News. 'We've got \$30,000 overhead now that we shouldn't have. It's our data.'"); Paul Gillrie, *5 Costly DMS Trends*, Gillrie Institute (Nov. 11, 2014) ("Some DMS vendors charge each third party an exorbitant monthly fee to interface with their systems. The third party has no choice but to pass these costs on to the final 'consumer'—the dealer."), available at <http://paulgillrie.com/5-costly-dms-trends>; David Barkholz, *Dealers Will Pay Up for Vendors' Data Access After CDK Switch*, AUTOMOTIVE NEWS (July 20, 2015) ("One vendor executive said the new program would raise monthly data fees from about \$50 per store per month today to as much as \$600 for customer relationship management software. CRM software requires lots of data to be exchanged between the vendor and the DMS. That extra cost will be passed along to dealerships, the executive said."), available at <http://www.autonews.com/article/20150720/RETAIL07/307209962/dealers-will-pay-up-for-vendors-data-access-after-cdk-switch>; DrivingSales, *supra* ("The elephant in the room is how much money third parties must pay to access the DMS data on behalf of a dealership, and how those charges are hidden as they are passed on down to the dealers. It's as if there is a massive 'data tax'").

of any other factor that could explain the price increase for apps, it is reasonable to conclude that Defendants' price hike for integration caused app prices to rise. Moreover, it is reasonable to conclude that, in the absence of the vertical restraints, Defendants could not have increased integration prices; thus, the Challenged Conduct can be said to have caused higher app prices for dealers.

52. Table 1 (*see supra* ¶ 40) suggests that CDK did not reduce DMS subscription prices paid by dealers to compensate for the increases in app prices. Anecdotal evidence corroborates this inference,⁵⁹ as does the fact that CDK's and

being paid by most dealerships that few know they are paying, let alone how much they are paying."); The Gillrie Institute, *5 Focus Points of Data Security for Dealers* ("The funding for SecurityFirst, of course, comes from increased fees. Dealers will pay indirectly as third party vendors pass along their increased cost."), *available at* <http://paulgillrie.com/5-focus-points-of-data-security>; Cliff Banks, *CDK, Reynolds and Reynolds Sued for Alleged Antitrust Practices*, THE BANKS REPORT (Feb. 4, 2017) ("Vendors have started passing those costs down to the dealers. Today, the industry has a situation where dealers are paying multiple vendors as much as \$600 to \$700 each a month just to access their own customer data. At some point, dealers are going to start passing those costs down to their car buyers and service customers. It's inevitable."), *available at* <http://www.thebanksreport.com/legalpolitical/cdk-reynolds-reynolds-sued-antitrust-practices/>; Cliff Banks, *Data Access Battle Goes Nuclear*, THE BANKS REPORT (Oct. 12, 2015) ("[V]endors say they'll have to pass the costs to the dealers if CDK continues to insist on the new prices."), *available at* https://www.dealervault.com/img/video-thumbs/TBR_Data_Access_15.pdf; Ralph Kisiel, *DaimlerChrysler Fears Data Security Decision Will Cost Dealers*, AUTOMOTIVE NEWS (Feb. 5, 2007) ("DaimlerChrysler has raised several concerns . . . saying [v]endors will pass the cost of Reynolds' certification on to dealers."), *available at* <http://www.autonews.com/article/20070205/SUB/70202065>. *See also* Declaration of Wayne Fitkin ¶ 18 (Mar. 22, 2017); Declaration of Michael Korp (Open Recalls) ¶¶ 27, 29 (May 12, 2017); Declaration of Chris Longpre (Lexus of Westminster) ¶¶ 7-8 (Apr. 4, 2017); Declaration of Brian Maas, President of the California New Car Dealers Association ¶¶ 18-21 (May 15, 2017).

59. David Barkholz, *Reynolds Joins Price War with Free-Trial Offer*, AUTOMOTIVE NEWS (May 23, 2011) (DMS price for CDK/Reynolds at "average-sized dealership" was \$5,000 per month per store), *available at* <http://www.autonews.com/article/20110523/RETAIL07/305239980/reynolds-joins-price-war-with-free-trial-offer>; David Barkholz, *Dealers Will Pay Up for Vendors' Data Access after CDK Switch*, AUTOMOTIVE NEWS (July 20, 2015) (DMS price for CDK/Reynolds at "a typical midsized dealership" was \$5,000 per month per store), *available at* <http://www.autonews.com/article/20150720/>

Reynolds' DMS contracts have contractually mandated yearly price increases.⁶⁰ Accordingly, there was no rebalancing of rates that could have compensated dealers for the effects of the integration price hike. That integration prices rose without an offset for dealers shows that Defendants were able to exercise market power in the relevant markets.

53. Finally, security or other non-price benefits did not increase in such a way as to compensate for higher app prices.⁶¹ And even if the security of data stored on the platforms increased, I understand that Defendants' restraints were not the least restrictive means to enhance security.⁶² As one example, Defendants could have offered different service tiers, allowing dealers to decide for themselves whether they wanted to pay more for purported security enhancements—similar to CDK's prior tiered offerings.⁶³

[RETAIL07/307209962/dealers-will-pay-up-for-vendors-data-access-after-cdk-switch](http://www.autonews.com/article/20161114/RETAIL/311149988/reynolds-sells-a-revolution); Vince Bond Jr., *Reynolds Sells a Revolution*, AUTOMOTIVE NEWS (Nov. 14, 2016), available at <http://www.autonews.com/article/20161114/RETAIL/311149988/reynolds-sells-a-revolution>; Declaration of Wayne Fitkin ¶ 18 (Mar. 22, 2017) ("Walter's Automotive Group does not receive a corresponding reduction in price for its DMS services from CDK to offset the higher data access fees."); Declaration of Michael Korp (Open Recalls) ¶ 24 (May 12, 2017) ("Every year, the DMS charges go up."); Declaration of Chris Longpre (Lexus of Westminster) ¶ 11 (Apr. 4, 2017) ("Price increases happen every year, and they are never lower than 5 percent.").

60. Authenticom Compl. ¶ 225; Reynolds Customer Guide, Version 8, at 5.

61. See, e.g., David Barkholz, *Dealers Will Pay Up for Vendors' Data Access After CDK Switch*, AUTOMOTIVE NEWS (July 20, 2015) ("Vendors briefed on CDK's new data-security program said nothing will change in the way they get data from CDK-served DMS dealerships under SecurityFirst except for a higher price. Prices generally will go up for 120 vendors currently in CDK's vendor-access program."), available at <http://www.autonews.com/article/20150720/RETAIL07/307209962/dealers-will-pay-up-for-vendors-data-access-after-cdk-switch>.

62. See Authenticom Compl., Part VIII.A (explaining that Defendants could have established "application program interfaces" (APIs) with independent data aggregators).

63. As noted above, in 2007, CDK offered a tiered system that included free basic access. See Kisiel 2008, *supra*. In addition, note that Dealertrack and Advent, two small DMS providers outside of Reynolds and CDK's agreement, permit Motor Vehicle Software Corporation (MVSC), a provider of Electronic Vehicle Registrations, to access

C. The Harm to Plaintiff Flowed from the Same Conduct That Generated Net Harm for Dealers and App Providers

54. As a result of the Challenged Conduct, Authenticom has been foreclosed from accessing dealers' data associated with at least 70 to 80 percent of franchised dealership stores,⁶⁴ as reflected by Defendants' combined DMS market share in North America. My understanding is that all or nearly all of Defendants' dealer and app customers have agreed to the exclusionary provisions, which simplifies the foreclosure calculus significantly. I further understand that the cumulative foreclosure share across Defendants is the relevant foreclosure share, especially in cases where Defendants have engaged in horizontal collusion. The high foreclosure share likely induced other independent integration providers to exit the industry. As noted above, SIS was forced to exit the integration business for Reynolds' dealers, and several other independents exited

dealer data without charging exorbitant fees. See Email from Jamison Kingfield, MVSC, to Joseph Nemelka, MVSC, and Napa Bulusu, MVSC (Mar. 30, 2015).

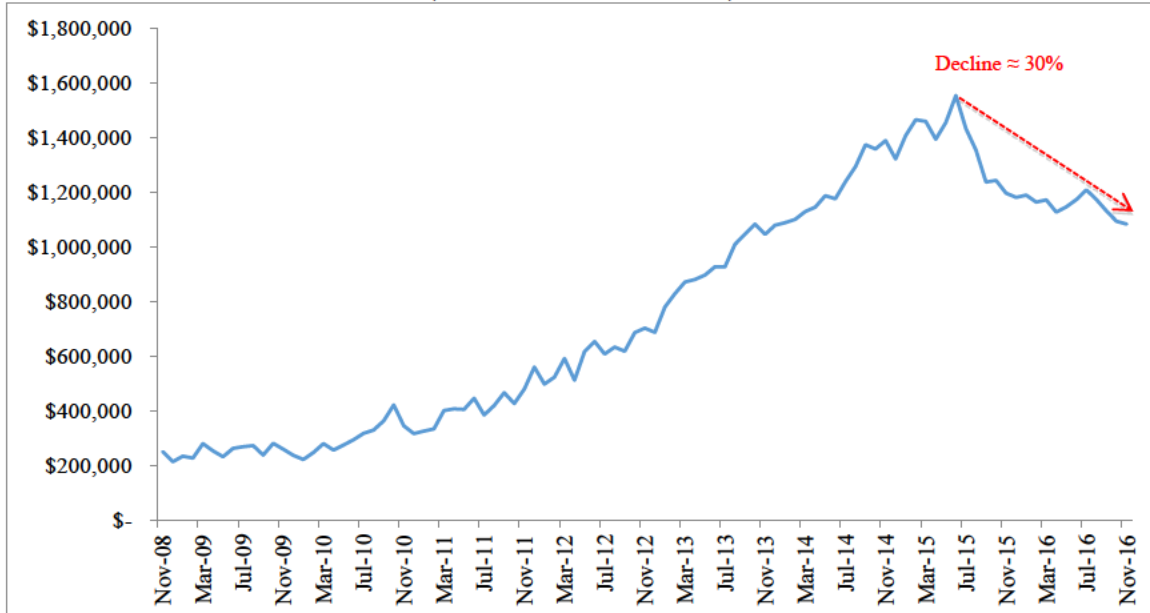
64. See, e.g., David Barkholz, *Dealers Get New Management System Option*, AUTOMOTIVE NEWS (Dec. 2, 2012) ("ADP and Reynolds each hold about a 40 percent DMS share"), available at <http://www.autonews.com/article/20121202/RETAIL07/312039973/dealers-get-new-management-system-option>; David Barkholz, *DMS Dilemma: Why It's So Hard to Switch*, AUTOMOTIVE NEWS (May 10, 2010) ("ADP Dealer Services and Reynolds together continue to dominate more than 80 percent of all DMS sales"), available at <http://www.autonews.com/article/20100510/RETAIL07/305109976/dms-dilemma%3A-why-its-so-hard-to-switch>; David Barkholz, *Dealers Decry Reynolds Crackdown*, AUTOMOTIVE NEWS (Nov. 21, 2011) ("Reynolds and rival ADP Dealer Services [provide] DMS systems to more than 80 percent of U.S. dealerships."), available at <http://www.autonews.com/article/20111121/RETAIL07/311219997/dealers-decry-reynolds-crackdown>; David Barkholz, *To Serve and Protect; As Security Breaches Loom, Dealerships Work to Safeguard Customer Data*, AUTOMOTIVE NEWS (Mar. 9, 2015) ("CDK Global and Reynolds and Reynolds . . . together provide DMS systems to about 80 percent of franchised stores."), available at http://www.autonews.com/article/20150309/FINANCE_AND_INSURANCE/303099949/dealerships-work-to-safeguard-data-as-security-breaches-loom. A more precise estimate of market shares should be available upon discovery.

the industry entirely.⁶⁵

55. Authenticom has been injured by the Challenged Conduct. As Figure 2 (below) shows, the Challenged Conduct has already had a significant effect on Authenticom's total revenues. After climbing at a steady rate for approximately five years, Authenticom's revenue began to decline abruptly beginning in June 2015. The cumulative decline in monthly revenue from June 2015 through November 2016 was approximately 30 percent. Individual revenue streams have incurred steeper declines: Monthly polling subscription revenue for Authenticom has fallen off by 60 percent. In addition, polling setup fees for Authenticom have declined by about 83 percent, indicating that Authenticom is attracting far fewer new customers than it had previously.

65. Email from Kathy Kerridge, Corporate Business Manager, Browning Automotive Grp., to Matt Armstrong, Vice President and General Manager, Motor Vehicle Software Corp. (Nov. 9, 2016) ("DMVDesk accesses through Proquote at this time and that access will cease soon, as CDK will not allow them into our box."). I understand that SelectQu and New Freedom Data Resources also exited the industry. *See* Authenticom Compl. ¶¶ 106-110.

FIGURE 2: AUTHENTICOM TOTAL MONTHLY REVENUE
(Nov. 2008-Nov. 2016)



Source: Authenticom's P&L Statements (P&L Information - 12.27.2016.xlsx).

And, as noted above, Authenticom's earnings across its entire product portfolio have also dropped, implying that it cannot spread its fixed costs over a large base of app customers. I understand that a separate expert, Professor Gordon Klein, opines that Authenticom's harm attributable to the Challenged Conduct is irreparable because Authenticom is now insolvent. Importantly, the harm to Authenticom derives from the same source—the Challenged Conduct—that likely generated harm to competition in the form of higher prices and reduced output for integration and apps. Accordingly, at the merits phase, it should be straightforward to show that Authenticom suffered antitrust injury as well.

V. INDIRECT EVIDENCE OF ANTITRUST IMPACT: DEFINING THE RELEVANT PRODUCT MARKETS

56. In this section, I analyze two relevant markets—the market for DMS sold to dealers (the primary market) and the market for dealer data integration services (the aftermarket)—and consider the competitive conditions. As noted above, the price hike in

the integration services market was not somehow offset by a price decrease to dealers (or other significant efficiency benefit). Because Defendants were able to increase prices to dealers (and other market participants), without countervailing efficiencies, it is clear that market power has been exercised in the relevant markets defined below. In antitrust economics, product market definition is a tool to infer pricing power—that is, the ability to raise prices above competitive levels. Here, we have direct evidence that such pricing power was exercised.

A. DMS Sold to Dealers: The Primary Market

57. The sale of DMS to dealers is a relevant product market, as evidenced by the fact DMS is essential to managing a dealer’s operations and there are no close substitutes.⁶⁶ Within this market, CDK’s and Reynolds’ combined market share is between 70 percent and 80 percent by dealerships, and likely much more when calculated using vehicle sales.⁶⁷ There is simply a lack of reasonable substitutes for delivering core DMS functionality—for example, the available apps add functionality only at the periphery. To my knowledge, no app has yet attempted to market itself as a complete substitute for a DMS, and all dealerships use a DMS—that is, none uses substitutes. High switching costs, including DMS-specific investments by dealers, ensure that the two dominant DMS providers enjoy substantial pricing power.⁶⁸ And the duration of

66. *See, e.g.*, Declaration of Wayne Fitkin ¶ 2 (Mar. 22, 2017) (“Dealer Management System (‘DMS’) software is vital to the functioning of Walter’s Automotive Group dealerships. Without DMS software, no transactions can take place.”).

67. Authenticom Compl. ¶ 33.

68. Declaration of Wayne Fitkin ¶ 3 (Mar. 22, 2017) (“It is highly disruptive to switch DMS providers. Walter’s Automotive Group entered into a five-year contract with CDK and is unlikely to switch DMS providers given the difficulty and cost involved in switching DMS providers.”); Declaration of Michael Korp (Open Recalls) ¶ 20 (May 12, 2017); *see also Elliott Letter* at 3 (CDK “generates a highly attractive annuity stream

incumbent DMS contracts with dealers (typically five to seven years) plus startup costs ensure that entry—another theoretical check on a DMS provider’s pricing power—will be kept at bay.⁶⁹

58. As explained above, via app providers’ pass through, Defendants’ price hike for integration was tantamount to a DMS price hike for dealers—roughly 36 percent for Reynolds’ dealers and 31 percent for CDK’s dealers. And yet neither DMS provider appears to have suffered significant dealer defections from that effective DMS price hike. This strongly suggests that a hypothetical monopoly provider of DMS could raise DMS prices above competitive levels and do so profitably.

B. Dealer Data Integration Service to Dealers and App Providers: The “Secondary Market” or Aftermarket

59. Dealer data integration services is also a relevant product market, as evidenced by the fact there is a demand for integration products, separate and apart from the demand for DMS and for apps. Indeed, ADP, the parent company of CDK until 2014, publicly recognized in its securities filings that integration services are “DMS-

through its subscription-based suite of software applications and enjoys a *sticky*, diverse customer base with an average DMS client tenure of 20 years. This customer *stickiness* is driven by the mission-critical nature of its DMS offering, the quality of its products and CDK’s long-term customer contracts—all of which make CDK’s subscription revenue stream grow nicely during good times while remaining incredibly resilient during economic downturns.”) (emphasis added); *Value Investors, supra* (“Some customers have been with CDK for 20+ years.”).

69. David Barkholz, *Dealers Get New Management System Option*, AUTOMOTIVE NEWS (Dec. 2, 2012) (“long dealer contracts of five years or more”), available at <http://www.autonews.com/article/20121202/RETAIL07/312039973/dealers-get-new-management-system-option>; David Barkholz, *DMS Dilemma: Why It’s So Hard to Switch*, AUTOMOTIVE NEWS (May 10, 2010) (“five-year deals usually negotiated by Reynolds and ADP”), available at <http://www.autonews.com/article/20100510/RETAIL07/305109976/dms-dilemma:-why-its-so-hard-to-switch>; David Barkholz, *2 DMS Newcomers Fight the Odds for Customers*, AUTOMOTIVE NEWS (Jan. 26, 2015), available at <http://www.autonews.com/article/20150126/RETAIL07/301269969/2-dms-newcomers-fight-the-odds-for-customers>.

independent solutions.”⁷⁰ Before the Challenged Conduct was employed by Defendants, multiple third-party providers, including Authenticom and SIS, offered integration to app providers for a fee.⁷¹ In other words, there was a thriving business market for integration services, as indicated in Figure 2 above (*see supra* ¶ 54).

60. Moreover, Defendants offer their own products for integration that are distinct from their DMS product. If integration and DMS were the same product, Defendants likely would not offer the products separately. Reynolds offers a separate product for integration called “RCI,” and CDK offers a separate product for integration called “3PA,” in addition to having two subsidiaries—Digital Motorworks and IntegraLink—that provide data integration services. By offering the products separately, Defendants can impose a separate charge on app providers, and thereby price to a different (app) demand than the (dealer) demand for DMS.

61. From the app provider’s perspective—that is, the integration service buyer’s perspective—there are no reasonable substitutes for access to a dealer’s data. With few exceptions, app providers simply cannot create any usable output for a dealer without access to the data. Indeed, it would be reasonable to describe access to dealer data as essential to the supply of apps; without access to data, app providers would be so impaired in their ability to compete against DMS-affiliated app providers that they would

70. Automatic Data Processing, Inc., Form 10-K at 5 (SEC filed Sept. 16, 2002), available at <https://www.sec.gov/Archives/edgar/data/8670/000000867002000008/form10k.txt>.

71. DrivingSales, *supra* (stating that, as of 2013, “[t]here are many companies who fill the Integration Partner role such as Authenticom, Superior Integrated Solutions, Inc. (SIS), Ryan Tech (who recently sold its DMS polling business to Authenticom), Digital Motor Works, Inc. (or DMI), and other”).

turn to entirely new enterprises.⁷²

62. As a result, a hypothetical monopoly provider of integration could profitably raise prices above competitive levels. Indeed, we have already observed two such increases (one by Reynolds, one by CDK), and neither Defendant suffered such a large loss of dealers that profits declined. As demonstrated in Part III, the losses from departing dealers, which incurred a large portion if not all of the integration price hike via higher app prices, was insufficient to offset the gains from the integration price hike.

63. A high market share in a relevant market combined with barriers to entry imply significant pricing power. By denying competing integrators access to dealer data, Defendants' combined share of integration services will likely approach their combined share of DMS sales, or somewhere between 70 and 80 percent, assuming that all dealers use apps and therefore need integration services. Moreover, the Challenged Conduct represents a barrier to entry for future integration providers and app services providers. Thus, analysis of substitution possibilities, market shares, and entry barriers confirms what we already have observed in the form of an actual price hike and output reduction in the integration market.

64. In the alternative, one could also define brand-specific aftermarkets for Defendants' respective integration services. In circumstances where the seller of a

72. See Declaration of Michael Korp (Open Recalls) ¶¶ 8, 15 (May 12, 2017) (dealer data necessary for app service); Declaration of Brian Maas, President of the California New Car Dealers Association ¶¶ 11-13 (May 15, 2017). In one stark example, a third-party vendor named eLead recently sought a Temporary Restraining Order, claiming irreparable harm, when Reynolds shut down its access to the Reynolds DMS over Presidents' Day Weekend. See Authenticom Compl. ¶ 7, *Data Software Services ("eLead") v. Reynolds & Reynolds Co.*, Case No. 2:17-cv-01347-SVW-JEM, Dkt. No. 19 (C.D. Cal. filed Feb. 18, 2017) ("[f]or vendors such as eLead, access to dealer DMS systems is absolutely critical").

primary product (in this case, the DMS) is able to “lock in” buyers, it may be able to exploit the resulting market power by charging higher prices for a secondary product (in this case, Defendants’ integration services). Conditions favorable to lock-in include high switching costs, significant buyer investment in the primary product, and imperfect information on the part of buyers.⁷³ These conditions would confer brand-specific market power — beyond the degree of market power ordinarily associated with any differentiated product — on Defendants, allowing them to impose an unexpected price hike on app providers (and, ultimately, dealers) after dealers have already committed to a specific DMS brand.

65. Here, the available evidence indicates that all of these conditions are present. *First*, as noted above, when a dealer selects a given DMS, it is required to make substantial DMS-specific investments. A dealer that wishes to switch from one DMS brand to another would incur the switching costs associated with making a similar set of investments in a new, unfamiliar system, along with the disruption of migrating from one system to the next.⁷⁴ Dealers have seldom opted to incur these switching costs; the average DMS client tenure is approximately 20 years.⁷⁵

66. *Second*, with respect to information costs, I have seen no evidence that

73. See, e.g., Bauer at 43-44.

74. See, e.g., David Barkholz, *DMS Dilemma: Why It’s So Hard to Switch*, AUTOMOTIVE NEWS (May 10, 2010), available at <http://www.autonews.com/article/20100510/RETAIL07/305109976/dms-dilemma:-why-its-so-hard-to-switch>; Thomson Reuters StreetEvents, *Edited Transcript: CDK – Q1 2017 CDK Global, Inc. Earnings Conference Call*, at 3 (Nov. 2, 2016) (statement by CDK Global CEO Brian MacDonald); David Barkholz, *Inside ‘Mission Impossible’: A DMS Change; How Store Succeeded in Sign-or-Switch Situation*, AUTOMOTIVE NEWS (Jan. 13, 2014), available at <http://www.autonews.com/article/20140113/RETAIL/301139967/inside-mission-impossible%3A-a-dms-change>.

75. Elliott Letter, *supra*.

dealers could have foreseen Defendants' future price hikes to app providers (or the extent to which the price hikes would have been passed through to dealers) at the time that dealers first invested in their DMS.⁷⁶ (Indeed, the integration services and applications markets have developed only recently.⁷⁷). Nor could dealers have foreseen that the price hikes would be sufficiently extreme to force app providers to pass on the costs to dealers. Moreover, Defendants' price secrecy provisions (or "anti-steering" provisions) prevent dealers from learning the true costs of Defendants' integration fees, which frustrate dealers' ability to discipline integration costs through competition in the primary DMS market. For all these reasons, it is not reasonable to expect that dealers would have anticipated the Challenged Conduct—or its effect on the cost of owning a particular DMS brand—when they initially invested in a DMS, making them susceptible to lock-in.

67. Finally, as noted above, here there is evidence that Defendants have, in fact, impaired rivals and raised prices above competitive levels in the dealer data integration market. In the case of Reynolds, the price increase occurred well before the imposition of the horizontal restraints in 2015. This strongly suggests that a hypothetical monopoly provider in the aftermarket for integration services could profitably raise prices above competitive levels.

C. The Relevant Geographic Market: The United States

68. The relevant geographic market is the United States. Defendants offer

76. Declaration of Michael Korp (Open Recalls) ¶ 22 (May 12, 2017) ("When we entered into our long-term DMS contract with CDK, we had no idea CDK would take this position and would begin disabling and blocking our ability to provide vendors and other third parties of our choosing with access to our own data."); *see also* Authenticom Compl. ¶ 114.

77. For example, Authenticom was incorporated in 2002, and it introduced its integration service in 2004.

DMS and dealer data integration services on a nationwide basis.⁷⁸ A hypothetical monopolist over these services within the United States could profitably raise prices above competitive levels. I have seen no evidence of significant substitution towards rivals located outside of the United States, let alone evidence of substitution sufficient to defeat such a price increase.

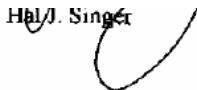
CONCLUSION

69. For the foregoing reasons, my preliminary conclusion based on publicly available data and Authenticom's documents is that the Challenged Conduct raised prices for dealers and app providers, but did not provide dealers with any offsetting benefit. Authenticom's harm flowed from the same place.

* * *

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Hal J. Singer



Executed on May 17, 2017.

78. Authenticom Compl. ¶ 32.